RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _09/518,297A_
Source: _1Fw16_
Date Processed by STIC: _1/24/05_

ENTERED

*edit authorized by applicant and examiner

CRF Errors Edited by the STIC Systems Branch

Serial Number: 09/518,297A   CRF Edit Date: 2/23/05
                                     Edited by: _____

____ Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line

____ Corrected the SEQ ID NO. Sequence numbers edited were:

_____

____ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:

_____

____ Deleted: ___ invalid beginning/end-of-file text ; ___ page numbers

____ Inserted mandatory headings/numeric identifiers, specifically:

_____

____ Moved responses to same line as heading/numeric identifier, specifically:

_____

✓ Other: Sequence 64 - changed <211> response from "43" to "44" and corrected amino acid numbering

IFW16

RAW SEQUENCE LISTING   DATE: 02/23/2005
PATENT APPLICATION: **US/09/518,297A**   TIME: 10:58:49

Input Set : **A:\PTO.AMC.TXT**
Output Set: **N:\CRF4\02232005\I518297A.raw**

```
 4 <110> APPLICANT: Lim, Moon Young
 5        Edwards, Cynthia A.
 6        Fry, Kirk E.
 7        Bruice, Thomas W.
 8        Starr, Douglas B.
 9        Laurance, Megan E.
10        Kwok, Yan
13 <120> TITLE OF INVENTION: DNA Binding Compound-Mediated Molecular
14        Switch System
16 <130> FILE REFERENCE: 54600-8130US00
18 <140> CURRENT APPLICATION NUMBER: US 09/518,297A
19 <141> CURRENT FILING DATE: 2000-03-03
21 <150> PRIOR APPLICATION NUMBER: US 60/122,513
22 <151> PRIOR FILING DATE: 1999-03-03
24 <150> PRIOR APPLICATION NUMBER: US 60/154,605
25 <151> PRIOR FILING DATE: 1999-09-17
27 <160> NUMBER OF SEQ ID NOS: 84
29 <170> SOFTWARE: FastSEQ for Windows Version 4.0
31 <210> SEQ ID NO: 1
32 <211> LENGTH: 11
33 <212> TYPE: DNA
34 <213> ORGANISM: Artificial Sequence
36 <220> FEATURE:
37 <223> OTHER INFORMATION: DNA response element
39 <400> SEQUENCE: 1
40 cgttcgcact t                                               11
42 <210> SEQ ID NO: 2
43 <211> LENGTH: 17
44 <212> TYPE: DNA
45 <213> ORGANISM: Artificial Sequence
47 <220> FEATURE:
48 <223> OTHER INFORMATION: DNA response element
50 <400> SEQUENCE: 2
51 cggagtactg tcctccg                                         17
53 <210> SEQ ID NO: 3
54 <211> LENGTH: 12
55 <212> TYPE: DNA
56 <213> ORGANISM: Artificial Sequence
58 <220> FEATURE:
59 <223> OTHER INFORMATION: DNA response element
W--> 61 <221> NAME/KEY: misc_feature
62 <222> LOCATION: (1)...(12)
63 <223> OTHER INFORMATION: n = A,T,C or G
```

P.6

RAW SEQUENCE LISTING   DATE: 02/23/2005
PATENT APPLICATION: US/09/518,297A   TIME: 10:58:49

Input Set : A:\PTO.AMC.TXT
Output Set: N:\CRF4\02232005\I518297A.raw

W--> 65 <400> 3
W--> 66 taattanggg ng   12
    68 <210> SEQ ID NO: 4
    69 <211> LENGTH: 551
    70 <212> TYPE: PRT
    71 <213> ORGANISM: Homo sapiens
    73 <220> FEATURE:
    74 <221> NAME/KEY: VARIANT
    75 <222> LOCATION: (0)...(0)
    76 <223> OTHER INFORMATION: transcriptional regulatory protein
    78 <400> SEQUENCE: 4
    79 Met Asp Glu Leu Phe Pro Leu Ile Phe Pro Ala Glu Pro Ala Gln Ala
    80 1   5   10   15
    81 Ser Gly Pro Tyr Val Glu Ile Ile Glu Gln Pro Lys Gln Arg Gly Met
    82   20   25   30
    83 Arg Phe Arg Tyr Lys Cys Glu Gly Arg Ser Ala Gly Ser Ile Pro Gly
    84   35   40   45
    85 Glu Arg Ser Thr Asp Thr Thr Lys Thr His Pro Thr Ile Lys Ile Asn
    86   50   55   60
    87 Gly Tyr Thr Gly Pro Gly Thr Val Arg Ile Ser Leu Val Thr Lys Asp
    88 65   70   75   80
    89 Pro Pro His Arg Pro His Pro His Glu Leu Val Gly Lys Asp Cys Arg
    90   85   90   95
    91 Asp Gly Phe Tyr Glu Ala Glu Leu Cys Pro Asp Arg Cys Ile His Ser
    92   100   105   110
    93 Phe Gln Asn Leu Gly Ile Gln Cys Val Lys Lys Arg Asp Leu Glu Gln
    94   115   120   125
    95 Ala Ile Ser Gln Arg Ile Gln Thr Asn Asn Asn Pro Phe Gln Val Pro
    96   130   135   140
    97 Ile Glu Glu Gln Arg Gly Asp Tyr Asp Leu Asn Ala Val Arg Leu Cys
    98 145   150   155   160
    99 Phe Gln Val Thr Val Arg Asp Pro Ser Gly Arg Pro Leu Arg Leu Pro
   100   165   170   175
   101 Pro Val Leu Pro His Pro Ile Phe Asp Asn Arg Ala Pro Asn Thr Ala
   102   180   185   190
   103 Glu Leu Lys Ile Cys Arg Val Asn Arg Asn Ser Gly Ser Cys Leu Gly
   104   195   200   205
   105 Gly Asp Glu Ile Phe Leu Leu Cys Asp Lys Val Gln Lys Glu Asp Ile
   106   210   215   220
   107 Glu Val Tyr Phe Thr Gly Pro Gly Trp Glu Ala Arg Gly Ser Phe Ser
   108 225   230   235   240
   109 Gln Ala Asp Val His Arg Gln Val Ala Ile Val Phe Arg Thr Pro Pro
   110   245   250   255
   111 Tyr Ala Asp Pro Ser Leu Gln Ala Pro Val Arg Val Ser Met Gln Leu
   112   260   265   270
   113 Arg Arg Pro Ser Asp Arg Glu Leu Ser Glu Pro Met Glu Phe Gln Tyr
   114   275   280   285
   115 Leu Pro Asp Thr Asp Asp Arg His Arg Ile Glu Glu Lys Arg Lys Arg
   116   290   295   300

RAW SEQUENCE LISTING   DATE: 02/23/2005
PATENT APPLICATION: US/09/518,297A   TIME: 10:58:49

Input Set : **A:\PTO.AMC.TXT**
Output Set: **N:\CRF4\02232005\I518297A.raw**

```
117 Thr Tyr Glu Thr Phe Lys Ser Ile Met Lys Lys Ser Pro Phe Ser Gly
118 305             310             315             320
119 Pro Thr Asp Pro Arg Pro Pro Arg Arg Ile Ala Val Pro Ser Arg
120             325             330             335
121 Ser Ser Ala Ser Val Pro Lys Pro Ala Pro Gln Pro Tyr Pro Phe Thr
122             340             345             350
123 Ser Ser Leu Ser Thr Ile Asn Tyr Asp Glu Phe Pro Thr Met Val Phe
124         355             360             365
125 Pro Ser Gly Gln Ile Ser Gln Ala Ser Ala Leu Ala Pro Ala Pro Pro
126     370             375             380
127 Gln Val Leu Pro Gln Ala Pro Ala Pro Ala Pro Ala Pro Ala Met Val
128 385             390             395             400
129 Ser Ala Leu Ala Gln Ala Pro Ala Pro Val Pro Val Leu Ala Pro Gly
130             405             410             415
131 Pro Pro Gln Ala Val Ala Pro Pro Ala Pro Lys Pro Thr Gln Ala Gly
132             420             425             430
133 Glu Gly Thr Leu Ser Glu Ala Leu Leu Gln Leu Gln Phe Asp Asp Glu
134         435             440             445
135 Asp Leu Gly Ala Leu Leu Gly Asn Ser Thr Asp Pro Ala Val Phe Thr
136     450             455             460
137 Asp Leu Ala Ser Val Asp Asn Ser Glu Phe Gln Gln Leu Leu Asn Gln
138 465             470             475             480
139 Gly Ile Pro Val Ala Pro His Thr Thr Glu Pro Met Leu Met Glu Tyr
140             485             490             495
141 Pro Glu Ala Ile Thr Arg Leu Val Thr Gly Ala Gln Arg Pro Pro Asp
142             500             505             510
143 Pro Ala Pro Ala Pro Leu Gly Ala Pro Gly Leu Pro Asn Gly Leu Leu
144             515             520             525
145 Ser Gly Asp Glu Asp Phe Ser Ser Ile Ala Asp Met Asp Phe Ser Ala
146     530             535             540
147 Leu Leu Ser Gln Ile Ser Ser
148 545             550
150 <210> SEQ ID NO: 5
151 <211> LENGTH: 19
152 <212> TYPE: DNA
153 <213> ORGANISM: Artificial Sequence
155 <220> FEATURE:
156 <223> OTHER INFORMATION: DNA response element
158 <400> SEQUENCE: 5
159 tccctatcag tgatagaga                                        19
161 <210> SEQ ID NO: 6
162 <211> LENGTH: 22
163 <212> TYPE: DNA
164 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: response element
169 <400> SEQUENCE: 6
170 cttaacactc gcgagtgtta ag                                    22
172 <210> SEQ ID NO: 7
```

```
          173 <211> LENGTH: 13
          174 <212> TYPE: DNA
          175 <213> ORGANISM: Artificial Sequence
          177 <220> FEATURE:
          178 <223> OTHER INFORMATION: response element
W-->  180 <221> NAME/KEY: misc_feature
          181 <222> LOCATION: (3)...(3)
          182 <223> OTHER INFORMATION: n = G or T
W-->  184 <221> misc_feature
          185 <222> LOCATION: (7)...(7)
          186 <223> OTHER INFORMATION: n = A,T,C or G
W-->  188 <221> misc_feature
          189 <222> LOCATION: (12)...(12)
          190 <223> OTHER INFORMATION: n = A or C
W-->  192 <400> 7
W-->  193 rgntcantga cny                                          13
          195 <210> SEQ ID NO: 8
          196 <211> LENGTH: 77
          197 <212> TYPE: PRT
          198 <213> ORGANISM: Artificial Sequence
          200 <220> FEATURE:
          201 <223> OTHER INFORMATION: activator sequence
          203 <400> SEQUENCE: 8
          204 Ala Pro Pro Thr Asp Val Ser Leu Gly Asp Glu Leu His Leu Asp Gly
          205  1               5                  10                  15
          206 Glu Asp Val Ala Met Ala His Ala Asp Ala Leu Asp Asp Phe Asp Leu
          207             20                  25                  30
          208 Asp Met Leu Gly Asp Gly Asp Ser Pro Gly Pro Gly Phe Thr Pro His
          209             35                  40                  45
          210 Asp Ser Ala Pro Tyr Gly Ala Leu Asp Met Ala Asp Phe Glu Phe Glu
          211     50                  55                  60
          212 Gln Met Phe Thr Asp Ala Leu Gly Ile Asp Glu Tyr Gly
          213 65                  70                  75
          215 <210> SEQ ID NO: 9
          216 <211> LENGTH: 11
          217 <212> TYPE: PRT
          218 <213> ORGANISM: Artificial Sequence
          220 <220> FEATURE:
          221 <223> OTHER INFORMATION: activator sequence
W-->  223 <221> NAME/KEY: VARIANT
          224 <222> LOCATION: (1)...(11)
          225 <223> OTHER INFORMATION: tetramer
W-->  227 <400> 9
          228 Asp Ala Leu Asp Asp Phe Asp Leu Asp Met Leu
          229  1               5                  10
          231 <210> SEQ ID NO: 10
          232 <211> LENGTH: 97
          233 <212> TYPE: PRT
          234 <213> ORGANISM: Artificial Sequence
```

Input Set : **A:\PTO.AMC.TXT**
Output Set: **N:\CRF4\02232005\I518297A.raw**

```
236 <220> FEATURE:
237 <223> OTHER INFORMATION: repressor sequence
239 <400> SEQUENCE: 10
240 Met Asp Ala Lys Ser Leu Thr Ala Trp Ser Arg Thr Leu Val Thr Phe
241 1               5                   10              15
242 Lys Asp Val Phe Val Asp Phe Thr Arg Glu Glu Trp Lys Leu Leu Asp
243             20              25              30
244 Thr Ala Gln Gln Ile Val Tyr Arg Asn Val Met Leu Glu Asn Tyr Lys
245         35              40              45
246 Asn Leu Val Ser Leu Gly Tyr Gln Leu Thr Lys Pro Asp Val Ile Leu
247     50              55              60
248 Arg Leu Glu Lys Gly Glu Glu Pro Trp Leu Val Glu Arg Glu Ile His
249 65              70                  75                  80
250 Gln Glu Thr His Pro Asp Ser Glu Thr Ala Phe Glu Ile Lys Ser Ser
251             85                  90                  95
252 Val
255 <210> SEQ ID NO: 11
256 <211> LENGTH: 36
257 <212> TYPE: PRT
258 <213> ORGANISM: Artificial Sequence
260 <220> FEATURE:
261 <223> OTHER INFORMATION: repressor sequence
263 <400> SEQUENCE: 11
264 Met Ala Ala Ala Val Arg Met Asn Ile Gln Met Leu Leu Glu Ala Ala
265 1               5                   10              15
266 Asp Tyr Leu Glu Arg Arg Glu Arg Glu Ala Glu His Gly Tyr Ala Ser
267             20              25                  30
268 Met Leu Pro Tyr
269         35
271 <210> SEQ ID NO: 12
272 <211> LENGTH: 116
273 <212> TYPE: DNA
274 <213> ORGANISM: Escherichia coli
276 <220> FEATURE:
277 <221> NAME/KEY: misc_feature
278 <222> LOCATION: (0)...(0)
279 <223> OTHER INFORMATION: partial promoter sequence
281 <400> SEQUENCE: 12
282 cgcggtcaga aaattatttt aaatttcctc ttgtcaggcc ggaataactc cctataatgc    60
283 gccaccactg acacggaaca acggcaaaca cgccgccggg tcagcggggt tctcct        116
285 <210> SEQ ID NO: 13
286 <211> LENGTH: 22
287 <212> TYPE: DNA
288 <213> ORGANISM: Escherichia coli
290 <220> FEATURE:
291 <221> NAME/KEY: misc_feature
292 <222> LOCATION: (0)...(0)
293 <223> OTHER INFORMATION: partial promoter sequence
295 <400> SEQUENCE: 13
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 02/23/2005
PATENT APPLICATION: US/09/518,297A   TIME: 10:58:50

Input Set : A:\PTO.AMC.TXT
Output Set: N:\CRF4\02232005\I518297A.raw

<u>Please Note:</u>
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 7,11
Seq#:7; N Pos. 3,7,12
Seq#:75; N Pos. 1,2,14,15

VERIFICATION SUMMARY   DATE: 02/23/2005
PATENT APPLICATION: **US/09/518,297A**   TIME: 10:58:50

Input Set : **A:\PTO.AMC.TXT**
Output Set: **N:\CRF4\02232005\I518297A.raw**

```
L:61   M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:65   M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3
L:66   M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:180  M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:184  M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:188  M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:192  M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:193  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:223  M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:227  M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9
L:1382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:0
L:1391 M:283 W: Missing Blank Line separator, <400> field identifier
L:1470 M:283 W: Missing Blank Line separator, <400> field identifier
```

IFW16

RAW SEQUENCE LISTING   DATE: 01/24/2005
PATENT APPLICATION: US/09/518,297A   TIME: 11:17:44

Input Set : A:\54600-8130US00.TXT
Output Set: N:\CRF4\01242005\I518297A.raw

```
 4 <110> APPLICANT: Lim, Moon Young
 5         Edwards, Cynthia A.
 6         Fry, Kirk E.
 7         Bruice, Thomas W.
 8         Starr, Douglas B.
 9         Laurance, Megan E.
10         Kwok, Yan
13 <120> TITLE OF INVENTION: DNA Binding Compound-Mediated Molecular
14         Switch System
16 <130> FILE REFERENCE: 54600-8130US00
18 <140> CURRENT APPLICATION NUMBER: US 09/518,297A
19 <141> CURRENT FILING DATE: 2000-03-03
21 <150> PRIOR APPLICATION NUMBER: US 60/122,513
22 <151> PRIOR FILING DATE: 1999-03-03
24 <150> PRIOR APPLICATION NUMBER: US 60/154,605
25 <151> PRIOR FILING DATE: 1999-09-17
27 <160> NUMBER OF SEQ ID NOS: 84
29 <170> SOFTWARE: FastSEQ for Windows Version 4.0
```

Does Not Comply
Corrected Diskette Needed

ERRORED SEQUENCES

```
1243 <210> SEQ ID NO: 64
1244 <211> LENGTH: (43)  44 shown below
1245 <212> TYPE: PRT
1246 <213> ORGANISM: Herpes Simplex Virus Type 2
1248 <220> FEATURE:
1249 <223> OTHER INFORMATION: amino acids 437-447 of VP16
1251 <400> SEQUENCE: 64
1252 Ala Asp Ala Leu Asp Asp Phe Asp Leu Glu Met Ala Asp Ala Leu Asp
1253                       5                  10                 15
1254 Asp Phe Asp Leu Glu Met Ala Asp Ala Leu Asp Asp Phe Asp Leu Glu
E--> 1255             20  20              25  25              30  30
1256 Met Ala Asp Ala Leu Asp Asp Phe Asp Leu Glu Met
E--> 1257             35  35              40  40
```

misaligned amino acid numbering

VERIFICATION SUMMARY   DATE: 01/24/2005
PATENT APPLICATION: **US/09/518,297A**   TIME: 11:17:46

Input Set : **A:\54600-8130US00.TXT**
Output Set: **N:\CRF4\01242005\I518297A.raw**

L:61 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:65 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3
L:66 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:180 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:184 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:188 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:192 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:223 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:227 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9
L:1255 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:64
M:332 Repeated in SeqNo=64
L:1257 M:252 E: No. of Seq. differs, <211> LENGTH:Input:43 Found:44 SEQ:64
L:1382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:0
L:1391 M:283 W: Missing Blank Line separator, <400> field identifier
L:1470 M:283 W: Missing Blank Line separator, <400> field identifier